

## AMENDMENTS TO THE CLAIMS

1-13. (Canceled)

14. (Currently Amended) ~~The fusion protein of claim 1~~ An autoregulated fusion protein comprising an output domain and a plurality of input domains, wherein at least one of the input domains is heterologous to the output domain, and the input domains interact with each other to allosterically and external ligand-dependently regulate the output domain wherein the output domain is a Neuronal Wiskott-Aldrich Syndrome Protein (N-WASP) WA domain, and the input domains are (i) a PDZ domain and (ii) a SH3 domain.

15. (Previously Presented) A method for modulating output of the fusion protein of claim 14, the method comprising the step of contacting the fusion protein with the ligand, whereby the output of the fusion protein is modulated.

16. (Previously Presented) The method of claim 15, further comprising the step of detecting the modulation of the output of the fusion protein.

17-22. (Canceled)